Indigent Criminal Defense: Where the NAS Recommendations Could Go Further

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The National Academy of Science Report, *Strengthening Forensic Science in the United States: a Path Forward* (hereafter NAS Report 2009) concludes that the courts are ill-equipped to ensure that only forensic results which are scientifically valid are admitted into evidence. Similarly, the report reaches a parallel conclusion that the courts are incapable of "curing the documented ills of the forensic science disciplines." [2] At the same time, the report notes that DNA has been subject to rigorous scrutiny by the courts which the report attributes to courts and lawyers being more "literate" about the science than they were in the past.[3]While some would still argue that DNA has not been sufficiently scrutinized, no one will deny that it has received more scrutiny than virtually all other forensics disciplines. It is widely agreed that defense challenges to DNA evidence led to advances in the technology and reporting of results.[4] While, on the one hand, regulation of forensic science should not be solely delegated to the adversarial process, on the other hand, history teaches that a robust adversarial process is a necessary line of defense against problems with science. This seems to suggest that while courts alone may not be able to "cure the ills" of forensic science, there are things courts and lawyers can do to prevent scientific evidence that has not been validated from being admitted into evidence in criminal trials. Similarly, there are things courts can and should do to ensure that when forensic science is admitted, it is scrutinized and evaluated. The purpose of this paper is to demonstrate that funding and transparency are fundamental to these endeavors.

Without question, lawyers and judges must become more "literate" or conversant in science in order to reduce the likelihood of wrongful convictions occurring as a result of the admittance of misleading or invalid forensic results. However, education alone will not cure these ills nor will the recommendations made by the academy alone. The academy reports "(w)ith more and better educational programs, accredited laboratories, certified forensic practitioners, sound operational principles and procedures, and serious research to establish the limits and measures of performance in each discipline, forensic science experts will be better able to analyze evidence and coherently report their findings in the courts." [5] While these are certainly important targets for improvement that must be achieved for forensic science to become accepted as reliable by the courts, the more fundamental change that must occur is for forensic science to become more science-like. However, achieving goals that are directed solely at what occurs in the labs as described in the NAS report without efforts to reform what occurs in the courts will do little to further the overriding goal of ensuring that only reliable, validated scientific evidence is admitted in criminal trials. Consequently, while the recommendations made

[1] The author is a defense attorney employed by the Los Angeles County Public Defender.
[2] Strengthening Forensic Science in the United States: A Path Forward, National Academy of Sciences, National Research Council report (2009) Page 85.
[3] *Id*. at 99.
[4] Aronson, J. *Genetic Witness* Rutgers University Press (2007)
[5] *Id*. at 110.

by the NAS must be implemented, defense attorneys must also have the resources to uncover invalid science when it is offered against criminal defendants. This includes providing funding for training, funding for expert assistance, and requiring proponents of scientific evidence to provide information that is necessary to assess the scientific results being presented.[6] Most crucial here is that public crime laboratories must be more transparent and that lawyers presenting scientific evidence have the resources and education to understand the limitations of the evidence to ensure that only reliable information is presented in court.

Transparency is a hallmark of good science. As one researcher put it, "Science and secrecy do not sit comfortably together." [7] Efforts by public crime labs to keep information confidential are contrary to basic tenets of science: objectivity and openness. Yet crime labs persist in withholding information from defense attorneys, the courts and even from prosecutors. Consequently the ability of attorneys to effectively investigate and cross-examine scientific evidence that is presented at trial is severely hampered and invalid scientific testimony often goes unchallenged.

In a recent study by Garrett and Neufeld, the authors analyzed testimony of prosecution forensic scientists in cases in which individuals had been wrongly convicted.[8] The authors found that there were primarily two types of invalid testimony presented to courts and jurors in these cases: (1) testimony in which the expert misused population data, and (2) testimony in which experts drew conclusions that were not supported by empirical data.[9] The authors concluded that the adversarial system failed to adequately challenge this expert testimony. The authors attribute this failure largely to the failure of defense attorneys to meaningfully cross-examine the experts, and their failure to obtain expert assistance.[10] It appears however, that there is an additional explanation for the admission of this invalid forensic evidence, namely, that defense attorneys were not provided sufficient underlying information or discovery pertinent to the forensic analysis to be able to adequately assess the reported results and the testimony offered.

Public crime labs have often gone to great lengths to prevent disclosure of information pertinent to the operations of the labs and quality control problems observed within the labs. Certainly, defense attorneys are at fault for not aggressively seeking such information. However, much of this information should be disclosed without the necessity of a specific request.[11] Lab reports provided to the defense rarely give the underlying bases for the opinions

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[6] Disclosure requirements of government officials will differ from those of the defense. See *Brady v. Maryland* (1963) 373 U.S. 83, 83 S.Ct. 1194, 10 L.Ed.2d 215; *Kyles v. Whitley* 1995) 514 U.S. 419, 435, 115 S.Ct. 1555, 131 L.Ed.2d 490; *Wardius v. Oregon* 412 U.S. 470, 477, 93 S.Ct. 2208, 2213, 37 L.Ed.2d 82 (1973)

[7] Jasanoff, S. *Transparency in Public Science: Purposes, Reasons, Limits*, Law and Contemporary Problems Vol.69:21 (2006).

[8] Garrett, B., Neufeld, P. *Invalid Forensic Science Testimony and Wrongful Convictions*, Virginia Law Review (2009)

[9] NAS Report (2009) page 7.

[10] These failures may inferentially be attributable a lack of education and funding.

[11] *Brady v. Maryland* (1963) 373 U.S. 83, 83 S.Ct. 1194, 10 L.Ed.2d 215.

expressed, including population data to support conclusions drawn regarding the strength of the evidence. It is certainly arguable that because these laboratories are frequently public government-run labs, information regarding quality assurance, use of particular protocols, and qualifications of those who work in the lab should be in the public domain. It also appears that many public labs aggressively fight discovery requests made by defense attorneys and intentionally withhold information that may be construed as damaging to the lab, the lab analyst or that undermines the results being presented. Finally, from lab to lab there is no consistency in what is disclosed and what is not.

Garrett and Neufeld describe a number of other cases that illustrate this problem. In many of the cases reviewed, forensic examiners testified regarding the low probability that individuals other than the defendant had a particular set of blood markers. This testimony was offered to establish that the presence of these markers in the evidence samples proved the defendant and not someone else left the evidence at the crime scene. In each of these cases, had the defense attorney been provided accurate and complete discovery, it is less likely that the witness would have been able to present unchallenged misleading information to the fact-finder.[12]

In two wrongful convictions described by Garrett and Neufeld that resulted from forensic Odontology testimony, reports from government experts that expressed opinions that the bitemarks observed did not come from the defendant were simply never disclosed to the defense. Specifically, in *New York v. Brown*[13] the government did not disclose to the defense that a State Police forensic dentist had determined that the bitemark evidence excluded Mr. Brown. Instead the prosecutor selected and presented the testimony of another expert who found the bitemarks "similar to a reasonable degree of dental certainty" and called the differences "inconsistent but explainable."[14] In *Arizona v. Ray Krone* it was never disclosed to the defense that the police had consulted with an FBI odontologist who, after examining the bitemarks, concluded they were not made by Mr. Krone. Instead, the prosecution presented the testimony of two odontologists, one with virtually no experience, who opined that the Mr. Krone's teeth made the bitemark.[15]

In yet another case, *Louisiana v. Gene Bibbins,* a fingerprint examiner testified that the comparison between a fingerprint, a critical piece of evidence in the case, and Mr. Bibbins was inconclusive. This testimony was presented despite the fact that there was a report from the Louisiana State Crime Lab that documented its finding that Mr. Bibbins was excluded as the source of the fingerprint. The result in each of these cases might very well have been different had law enforcement disclosed the information to the defense attorneys. In each of these cases prosecutors had a clear duty to disclose this information even in the absence of a

[12] Garrett and Neufeld at pages 19-26.
[13] *Id*. at 36-37.
[14] *Id*. at 36
[15] *Id*. at 37.

request by the defense.[16] This duty existed whether or not the prosecutor had actual knowledge of the information.[17] Furthermore, this information was the type that prosecutors have a duty to specifically request and of which lab employees understand the significance.[18]

Non-disclosure of significant information that calls into question the reliability of lab work may be even more prevalent than is reported by Garrett and Neufeld. Such non-disclosure appears to have been one of the reasons the misconduct of individuals like Joyce Gilchrist, Arnold Melnikoff and Fred Zain went undiscovered for many years. And non-disclosure of relevant information is not limited to these high profile cases of misconduct nor is it only an issue of the past. In Los Angeles County for example, it has recently become public knowledge that members of the Los Angeles Police Department Fingerprint Unit made erroneous fingerprint identifications in two separate cases. As result of the erroneous identifications an internal audit was conducted. However, what is remarkable is that no one outside of LAPD other than those directly involved in the cases was aware of these errors until the Los Angeles Times reported the story in October 2008..

The audit disclosed that on at least two occasions members of the fingerprint unit had erroneously matched a latent print to an innocent suspect. Six latent print examiners were involved in the two erroneous identifications. In each case, a latent print examiner determined that the latent print matched a suspect. Each identification was reviewed and verified by two additional examiners who made the same error. The erroneous identifications were apparently discovered by defense attorneys who hired independent experts to examine the fingerprint. The examiners involved in the erroneous identifications had conducted latent print examinations in numerous other cases. Nevertheless, this information, relevant to the qualifications of the examiners was not disclosed to defense attorneys who represented defendants in other cases in which these print examiners had made identifications. It was not until the Los Angeles Times reported this incident that it was brought to the attention of prosecutors and defense attorneys in Los Angeles County. The audit that was prepared also outlined a number of other deficiencies that exist in the Los Angeles Police Department Latent Print Unit including findings that existing quality assurance processes are inadequate. The report also noted that one of the files associated with one of the erroneous identifications disappeared shortly after the error was discovered.

Another striking example of the lack of transparency and openness is described in a recent death penalty reversal. In *Duncan v. Ornoski*[19] a government crime lab analyst testified for the prosecution at Mr. Duncan's capital murder trial regarding blood stains collected from the scene of the crime. According to the witness, there were a number of stains that did not match the victim's blood type. Upon questioning by the prosecutor, the analyst testified that it was

[16] *Brady v. Maryland*1963) 373 U.S. 83, 83 S.Ct. 1194, 10 L.Ed.2d 215.
[17] *Kyles v. Whitley* (1995) 514 U.S. 419, 435, 115 S.Ct. 1555, 131 L.Ed.2d 490.
[18] This is not always the case. Frequently, prosecutors are unaware of the type of information maintained by the labs and labs employees take the position that because they are not lawyers and they do not know all the particulars of the case, they do not what constitutes *Brady* information.
[19] 528 F.3d 1222 (2008)

possible that one of the seemingly anomalous blood types was a result of bacteria, animal blood or another contaminant, another could have been the result of contamination from another source and the final stain may not have been blood at all. However, in post-conviction proceedings the analyst submitted a declaration in which he stated that if he had been questioned further he would have stated that while anything is possible, in fact, contamination in conventional serology results is uncommon and it was more likely than not that the other stains represented human bodily fluids rather than animal or a bacteria. This penalty phase of the trial was reversed based on the ineffectiveness of Mr. Duncan's counsel in failing to obtain confidential testing of his client's blood and for failing to obtain the assistance of a blood expert. While the issue does not appear to have been addressed in the case, there is certainly a question as to why the information the analyst declared in post-conviction proceedings was never disclosed to the defense pretrial.

These examples illustrate the problems that currently exist regarding the failure of the government and the judiciary to ensure that information favorable to the accused or which undermines the government's case is disclosed to the defense. Requiring greater transparency from government labs is an essential component to any effort to reform forensic science. The reality is that even if the science itself improves and research is conducted that demonstrates the validity or invalidity of certain forensics methods, without greater access to information about the labs and a requirement that forensic reports include all data relied on, all assumptions made and all limitations of opinions rendered, defendants will be denied fair trials and wrongful convictions attributable to the misuse of forensic science will continue to occur. To that end labs must be required to disclose information regarding the analysis or examination that was conducted, provide documentation of quality control problems in the lab or associated with a particular criminalist, and provide access to standard operating procedures and validation studies. Lab reports must be complete, thorough and accurate. They should include the basis for and the limitations of any opinions.

The NAS report specifically recommends, "laboratory reports generated as the result of a scientific analysis should be complete and thorough. They should describe, at minimum, methods and materials, procedures, results, and conclusions, and they should identify, as appropriate, the sources of uncertainty in the procedures and conclusions along with estimates of their scale (to indicate the level of confidence in the results)." [20]

In addition to cases in which existing information is simply not disclosed, there are a number of documented cases in which the government has actively prevented the defense from accessing information that may have cast doubt on the guilt of a suspect. In *Rivera v. Mueller*[21], a DNA profile was developed that did not match the suspect. The defense requested the profile be compared to the profiles in the CODIS (Combined DNA Index System) database

[20] NAS Report (2009) at 186.
[21] 596 F.Supp.2d 1163 (N.D. Ill. 2009)

in order to determine whether someone in the database matched the profile that had been developed. Law enforcement refused to conduct the search. Two reasons were offered by the government for its refusal: (1) the profile could not be run because it was developed by an unaccredited lab and (2) a match between the evidence and another individual would not be relevant to the case.

A lab's accreditation status should have little to do with whether a profile may be compared to profiles in the database. In such a situation the government lab would have access to all the underlying data and could examine it to ensure the test was conducted properly. The issue of the relevancy of a resulting match should be for the courts to determine not the labs.[22] In other words, it is not for the lab to determine whether a defendant may or may not present evidence to a fact-finder.

Information maintained in government owned databases should be accessible to criminal defendants who make a requisite showing. Such databases should also be available to researchers who identify genuine scientific needs. A recent letter to the editor of Science Magazine signed by 41 research scientists, forensic scientists, and legal scholars calls for qualified access to the CODIS DNA. Specifically, the authors of this letter describe in detail the need for access to the CODIS database for the purpose of evaluating the underlying assumptions that are made in presenting the probability that the DNA match to the evidence is not a coincidence.[23] Modern forensic science benefits from the existence of a number of robust databases that include substantial numbers of individual profiles. These databases include CODIS (DNA database), AFIS (fingerprint database) and NIBIN (firearms database) among others. These databases have been shown to be powerful tools in identifying individuals suspected of committing crimes. However, access to these databases has been largely restricted to law enforcement. In fact, in many cases law enforcement officials have actively prevented defense attorneys from obtaining information from these databases that could help prove the innocence of a criminal defendant. Statutes prescribing how these databases are to operate have been drafted by law enforcement in such a manner as to explicitly prevent defense attorneys from obtaining access. (See, for example, California Penal Code Section 299.5).

There appears to be no valid reason why defense attorneys should be foreclosed from gaining access to the information in these databases that might be relevant to a criminal prosecution as long as the privacy interests of those involved are protected. The government should not be able to maintain exclusive control of these databases and prevent access to them.

Additionally, defense attorneys need access to transcripts of testimony of forensic examiners. As noted in the Garrett and Neufeld article, in some cases, it was the same examiner

[22] In many of the cases described, it appears that the lab takes on a partisan role when it decides not to disclose certain information that could be detrimental to the government's case.
[23] "Time for Disclosure" letter to the editor Science Magazine Vol.326 (December 2009)

who time and time again presented invalid science in court.[24] Furthermore, the type of invalid testimony presented was largely of two kinds[25]. Consequently, had prior transcripts of these criminalist been available for review, it is conceivable that a lawyer with funding for expert assistance and armed with prior transcripts of the criminalist's testimony would have been able to uncover errors made in the current case or would, at a minimum, have been on notice that such errors have been made. While the FBI and an independent government prosecution agency (American Prosecutors Research Institute)[26] appear to maintain a database of transcripts of defense experts, no defense organization or governmental entity maintains such a database of transcripts of government scientists. In fact, Cole, Thompson and Velasquez described the need for such a database and the feasibility of compiling one in a recently published article.[27] Congress should appropriate funding for the development of such a database. Not only would this help defense attorneys better prepare their cases but this would also permit independent researchers to analyze testimony being presented and make recommendation as to how to improve the presentation of scientific evidence. Finally, such a repository might actually deter criminalists from overstating their results in court.

Last, but certainly not least, defense attorneys need funding for expert assistance. In each case described above, it is clear that either expert assistance was not sought or funding for such assistance was denied. A defendant's ability to hire expert witnesses to assist in the evaluation of a case and/or to present testimony to critique the method as applied in a specific case or the method itself is obviously of critical importance. With court and public defender budgets being reduced, obtaining expert assistance has become increasingly difficult. Nevertheless, ensuring funding for expert assistance is fundamental to ensuring fair and just results and to preventing wrongful convictions.

As previously described, substantial reforms to most forensic disciplines are necessary. The recommendations made by the National Academy of Science directly respond to findings that reveal that many of the forensic disciplines commonly used in criminal prosecutions have not been adequately validated. A serious response to that criticism certainly

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[24] Garrett and Neufeld 6.
[25] *Id*. at 7.
[26] APRI's National Center for Prosecution of Child Abuse maintains a comprehensive data bank of trial transcripts of child abuse experts who often testify in opposition to the state's case. These transcripts are made available to prosecutors preparing to cross-examine one of these witnesses. Many of these professional witnesses present medical and psychological research out of context and the Center staff is often able to assist prosecutors in keeping these experts from testifying or, at the least, in effectively cross-examining them. Our data base will remain effective as long as prosecutors continue to send us transcripts of trials in which one of these witnesses testifies. Accordingly, please remember to help your colleagues as they have helped you and send the pertinent portions of your trial to the Center. http://www.ndaa.org/publications/newsletters/apri_update_vol_11_no_9_1998.htm

[27] . See Cole, S., Thompson, W., Velasquez, B. Assessing the Feasibility of Building a Database of Trial Transcripts Containing Scientific Testimony (The Project on Scientific Knowledge and Public Policy SKAPP Sept.2009

needs to occur. However, attempting to validate these disciplines will not prevent invalid, overstated and erroneous forensic science from being presented in court. To that end the government must undertake measures to encourage and/or require labs to disclose information that will permit defense attorneys to more readily identify invalid, overstated and erroneous results and to properly cross-examine and present evidence to undermine and discredit such results. Rules must be promulgated that ensure such information will be disclosed. Sanctions should be imposed on labs that fail to disclose relevant information. Defense attorneys and researchers should be given access to government managed databases with adequate safeguards in place to protect privacy interests.. Finally, funding should be appropriated to develop a repository of transcripts of testimony of government criminalists and to guarantee defense attorneys have access to necessary expert assistance.